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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/813,210

03/29/2004

Ashwath Nagaraj

64311

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7590

01/16/2007

THE LAW OFFICE OF KIRK D. WILLIAMS
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EXAMINER

PORTKA, GARY J

ART UNIT

PAPER NUMBER

2188

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/813,210

Applicant(s)

NAGARAJ, ASHWATH

Examiner

Gary J. Portka

Art Unit

2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 29, 2004, and October 6, 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 and 17-23 is/are allowed.
- 6) ☒ Claim(s) 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/06/05 (3 pages).
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-23 are presented for examination.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on October 6, 2005 were considered by the examiner.

Claim Objections

3. Claim 14 is objected to because of the following informalities: At line 1 of the claim "the method" should probably instead recite "the apparatus". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Sit et al., US 7,152,140 B2.

6. As to claims 11 and 14, Sit discloses a *method and apparatus with means for protecting associative memory entries, comprising determining a protected entry for each original entry of a plurality of original associative memory entries (DATA CONTENT and/or MASK CONTENT, Fig. 4), the protected entry including the original*

entry and one or more protection bits (DP, 1, and/or 1, MP, Fig. 4), wherein the bits are determined by a parity or other error protection calculation on the original entry, and programming an associative memory with the protected entry (see Abstract, Figs. 1 and 4, col. 3 lines 14-27 and 38-47).

7. As to claims 12 and 15, Sit discloses *programming the associative memory with the protected entry includes programming each in two consecutive locations in the memory (since the entry as recited may be considered to consist of both data and mask rows shown in Fig. 4, each row a location; alternatively, two consecutive locations may be considered the original DATA CONTENT and DP, or the original MASK CONTENT and MP of Fig. 4).*

8. As to claims 13 and 16, Sit discloses *determining a protected lookup value (= query) based on an original lookup value, the protected lookup value including the original lookup value and one or more protection bits determined by said parity or other error protection calculation on the original lookup value, and performing the lookup in the memory based on the protected value (see Tables II and III, cols. 3 and 4, where queries are made by determining a lookup value including original data or mask and associated parity).*

9. Claims 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ichiriu, US 6,978,343 B1.

10. As to claims 11 and 14, Ichiriu discloses a *method and apparatus with means for protecting associative memory entries, comprising determining a protected entry for each original entry of a plurality of original associative memory entries (a row or column*

of the CAM, Fig. 3), *the protected entry including the original entry and one or more protection bits* (parity at 125 or 127, Fig. 3), *wherein the bits are determined by a parity or other error protection calculation on the original entry, and programming an associative memory with the protected entry* (see Abstract, Figs. 2 and 3, col. 2 line 64 to col. 3 line 10, and col. 9 lines 7-27).

11. As to claims 12 and 15, Ichiriu discloses *programming the associative memory with the protected entry includes programming each in two consecutive locations in the memory* (since the entry as recited may be considered to consist of two rows shown in Fig. 3, each row a location; alternatively, two consecutive locations may be considered the data D and mask M locations of each row shown in Fig. 9).

12. As to claims 13 and 16, Ichiriu discloses *determining a protected lookup value based on an original lookup value, the protected lookup value including the original lookup value and one or more protection bits determined by said parity or other error protection calculation on the original lookup value, and performing the lookup in the memory based on the protected value* (see col. 10 line 62 to col. 11 line 8, where row parity values provided from an external source generate the parity from the data as recited).

Allowable Subject Matter

13. Claims 1-10 and 17-23 are allowed.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patent No:

6,879,504 CAM having error detection and correction circuits.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary J. Portka whose telephone number is (571) 272-4211. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on (571) 272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 7, 2007

Gary J Portka
Primary Examiner
Art Unit 2188
GARY PORTKA
PRIMARY EXAMINER

